[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0101; Directorate Identifier 2010-SW-042-AD;

Amendment 39-17046; AD 2012-09-11]

RIN 2120-AA64

Airworthiness Directives; Eurocopter Deutschland GMBH Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for Eurocopter Deutschland GMBH (ECD) Model MBB-BK 117 C-1 and C-2 helicopters. This AD requires installing a placard that corresponds to the maximum permissible flight altitude, amending the Rotorcraft Flight Manual (RFM) to revise the maximum permissible operating altitude, and inserting revised performance charts into the RFM. This AD also requires a repetitive maintenance "MAX N1 CHECK" to determine the appropriate maximum altitudes. This AD also requires, if the engine or a Fuel Control Unit (FCU) or module 2 or 3 is replaced, repeating the maintenance "MAX N1 CHECK." Finally, this AD specifies that modifying both engines would provide terminating action for the AD requirements. This AD was prompted by the failure of a "few" engines to reach the specified one-engine-inoperative (OEI) rating at altitudes above 10,000 feet. The actions of this AD are intended to prevent flights at altitudes where the full OEI engine power

cannot be reached and subsequent loss of control of the helicopter if an OEI operation is required.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain documents listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For the Eurocopter service information identified in this AD, contact American Eurocopter Corporation, 2701 Forum Drive, Grand Prairie, Texas 75053-4005; telephone (800) 232-0323; fax (972) 641-3710; or at http://www.eurocopter.com. For the Turbomeca Groupe SAFRAN service information contact SAFRAN Turbomeca, 2709 N. Forum Drive, Grand Prairie, Texas 75052; telephone (800) 662-6322; or at http://www.turbomeca-usa.com. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

EXAMINING THE AD DOCKET: You may examine the AD docket on the Internet at http://www.regulations.gov or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, any incorporated-by-reference service information, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (phone: 800-647-5527) is U.S. Department of Transportation, Docket Operations Office, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Ed Cuevas, Aviation Safety Engineer, Safety Management Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email ed.cuevas@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On February 10, 2012, at 77 FR 7005, the Federal Register published our Notice of proposed rulemaking (NPRM), which proposed to amend 14 CFR part 39 to include an AD that would apply to ECD Model MBB-BK 117 C-1 and C-2 helicopters with a Turbomeca Arriel 1E2 engine installed, which has an FCU that has not been modified with Turbomeca Modification TU 358. That NPRM proposed to require installing a placard that corresponds to the maximum permissible flight altitude, amending the RFM to revise the maximum permissible operating altitude for both the MBB-BK 117 C-1 and C-2 helicopters, and inserting revised performance charts into the RFM for the C-1 model. That NPRM also proposed to require maintenance "MAX N1 CHECKs" to determine the modified maximum operational altitudes. Additionally, that NPRM proposed to require, if the engine or an FCU or module 2 or 3 is replaced, repeating the maintenance "MAX N1 CHECK." Finally, that NPRM proposal specified that modifying both engines with Turbomeca Modification TU 358 would be terminating action for the requirements of the NPRM; and after that modification of both engines, you would be permitted to remove the placards and flight manual revisions required by the NPRM. The proposed requirements were intended to prevent flights at altitudes where the full OEI engine power cannot be reached and subsequent loss of control of the helicopter if an OEI operation is required.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD No. 2008-0061, dated March 27, 2008, to correct an unsafe condition for ECD Model MBB-BK 117 C-1 and C-2 helicopters. The EASA states that during testing at maximum certification altitude, a few helicopters could not reach the specified OEI power threshold. The cause was identified as an engine acceleration limitation due to a lower delivered fuel flow than the engine fuel flow demand needed to achieve the OEI rating at high altitude. They state that this condition could occur at altitudes exceeding 10,000 feet depending on the engine and FCU characteristics.

Comments

We gave the public the opportunity to participate in developing this AD, but we did not receive any comments on the NPRM.

FAA's Determination

These helicopters have been approved by the aviation authority of Germany and are approved for operation in the United States. Pursuant to our bilateral agreement with Germany, the EASA, its technical representative, has notified us of the unsafe condition described in the EASA AD. We are issuing this AD because we evaluated all information provided by the EASA and determined the unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs and that air safety and the public interest require adopting the AD requirements as proposed except for minor editorial changes. These minor editorial changes are consistent with the intent of the proposals in the NPRM and will not increase the economic burden on any operator nor increase the scope of the AD.

Differences Between this AD and the EASA AD

We do not reference the effective date stated in the EASA AD because it has passed. We have modified the initial placard wording to make it clear that before performing the topping check, the "operating altitude" for takeoff, landing, and hovering is a pressure altitude (PA) of 10,000 feet, but flight up to a maximum 13,000 feet is permitted as long as the helicopter stays at an airspeed above effective translational lift. After the topping check is performed, the "operating altitude" limitation refers to all modes of flight.

Related Service Information

Eurocopter has issued Alert Service Bulletin (ASB) No. ASB-MBB-BK117-60-121, Revision 4, (ASB121) for Model MBB-BK 117 C-1 helicopters and ASB No. MBB BK117 C-2-71A-003, Revision 3 (ASB003), for Model MBB-BK 117 C-2 helicopters. Both ASBs are dated December 11, 2007, and apply to Turbomeca Arriel 1E2 engines. Both ASBs specify a "MAX N1 CHECK" for helicopters with FCUs that have not been modified by Turbomeca modification TU 358, for takeoffs, landings, and hovering in-ground effect (IGE) or hovering out-of-ground effect (OGE) higher than 10,000 feet or flight above 13,000 feet. The ASBs specify limiting the maximum permissible flight altitude if the OEI rating cannot be achieved. The ASBs also specify the measures are no longer necessary when you modify both engines (Modification TU 358). The EASA classified these ASBs as mandatory and issued AD No. 2008-0061, dated March 27, 2008, to ensure the continued airworthiness of these helicopters.

Costs of Compliance

We estimate that this AD will affect 108 helicopters of U.S. Registry. We estimate that operators may incur the following costs in order to comply with this AD. It will take about 1 work-hour per helicopter to affix a placard and insert the RFM pages at an average labor rate of $85 per work-hour. We estimate 54 maintenance flight checks for higher altitude operators will be required at $1,000 each. There are no parts costs. Based on these figures, we estimate the total cost impact of this AD on U.S. operators to be $63,180.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on helicopters identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the

national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a “significant regulatory action” under Executive Order 12866;

(2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

(3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2012-09-11 **EUROCOPTER DEUTSCHLAND GMBH:** Amendment 39-17046; Docket No. FAA-2012-0101; Directorate Identifier 2010-SW-042-AD.

(a) Applicability.

This AD applies to Eurocopter Deutschland GMBH Model MBB-BK 117 C-1 and C-2 helicopters with a Turbomeca Arriel 1E2 engine installed, which has a Fuel Control Unit (FCU) that has not been modified with Turbomeca Modification TU 358, certificated in any category.

(b) Unsafe Condition.

This AD defines the unsafe condition as failure of engines to reach the specified one-engine-inoperative (OEI) rating at altitudes above 10,000 feet. This condition could result in high altitude operations when full OEI engine power is not available and subsequent loss of control of the helicopter if an OEI operation is required.

(c) Effective Date.

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(d) Compliance.

You are responsible for performing each action required by this AD within the specified compliance time.

(e) Required Actions.

(1) For Model MBB-BK117 C-1 helicopters:

(i) Before any flight operation at or above a pressure altitude (PA) of 10,000 feet, unless accomplished previously:

(A) Affix a placard to the instrument panel in plain view of the pilot(s), which states: "Maximum altitude for takeoff, landing, and hovering is 10,000 ft PA. Maximum operating altitude above effective translational lift is 13,000 ft PA," or comply with paragraph (e)(1)(iii) of this AD. The term "hovering" as used in this placard includes both in-ground effect (IGE) and out-of-ground effect (OGE) hovering.

(B) Revise the Altitude Limitations section of the Rotorcraft Flight Manual (RFM), in accordance with paragraph 2.9 on pages 9 and 10; paragraph B.2.1 on page 15; and paragraph C.2.3.2 on page 16 of Eurocopter Alert Service Bulletin No. ASB-MBB-BK117-60-121, Revision 4, dated December 11, 2007 (ASB121).

(C) Attach each revised page 11-1-7 (ASB121, page 11) through 11-1-10 (ASB121, page 14) to the unrevised same-numbered page in the Performance section of the RFM.

(ii) Within 50 hours time-in-service (TIS), unless accomplished previously:

(A) Revise the RFM as required by paragraphs (e)(1)(i)(B) and (e)(1)(i)(C) of this AD; and

(B) Affix the placard as required by paragraph (e)(1)(i)(A) of this AD or comply with paragraph (e)(1)(iii) of this AD.

(iii) At intervals not to exceed 600 hours TIS:

(A) Before operating between a 16,000 ft PA and 18,000 ft PA, perform the "MAX N1 CHECK" by following the Accomplishment Instructions, paragraph 2.B.1.1., of ASB121. If the OEI rating is not reached, either affix a placard as required by paragraph (e)(1)(i)(A) or comply with paragraph (e)(1)(iii)(B) or (e)(1)(iii)(C) of this AD.

(B) Before operating between 13,000 ft PA and 16,000 ft PA, perform the "MAX N1 CHECK" by following the Accomplishment Instructions, paragraph 2.B.1.4., of ASB121.

(1) If the OEI rating is reached, affix a placard to the instrument panel in plain view of the pilot(s), which states: "Maximum operating altitude is 16,000 ft PA."

(2) If the OEI rating is not reached, either affix a placard as required by paragraph (e)(1)(i)(A) of this AD or comply with paragraph (e)(1)(iii)(C) of this AD.

(C) Before operating between 10,000 ft PA and 13,000 ft PA, perform the "MAX N1 CHECK" by following the Accomplishment Instructions, paragraph 2.B.1.7., of ASB121.

(1) If the OEI rating is reached, affix a placard to the instrument panel in plain view of the pilot(s), which states: "Maximum operating altitude is 13,000 ft PA."

(2) If the OEI rating is not reached, affix a placard as required by paragraph (e)(1)(i)(A) of this AD.

(2) For Model MBB-BK 117 C-2 helicopters:

(i) Before any flight operation at or above a PA of 10,000 feet, unless accomplished previously:

(A) Affix a placard to the instrument panel in plain view of the pilot(s), which states: "Maximum altitude for takeoff, landing, and hovering is 10,000 ft PA. Maximum operating altitude above effective translational lift is 13,000 ft PA," or comply with paragraph (e)(2)(iii) of this AD. The term "hovering" as used in this placard includes both IGE and OGE hovering.

(B) Revise the Altitude Limitations section of the RFM in accordance with paragraph A.2.3. on page 10 and paragraph 2.8. on page 11 of Eurocopter Alert Service Bulletin No. MBB BK117 C-2-71A-003, Revision 3, dated December 11, 2007 (ASB003).

(ii) Within 50 hours TIS, unless accomplished previously:

(A) Revise the RFM as required by paragraph (e)(2)(i)(B) of this AD; and

(B) Affix a placard as required by paragraph (e)(2)(i)(A) of this AD or comply with paragraph (e)(2)(iii) of this AD.

(iii) At intervals not to exceed 600 hours TIS:

(A) Before operating between 16,000 ft PA and 18,000 ft PA, perform the "MAX N1 CHECK" by following the Accomplishment Instructions, paragraph 3.A.(1) (on pages 4 and 5), of ASB003. If the OEI rating is not reached, either affix a placard as required by paragraph (e)(2)(i)(A) or comply with paragraph (e)(2)(iii)(B) or (e)(2)(iii)(C) of this AD.

(B) Before operating between 13,000 ft PA and 16,000 ft PA, perform the "MAX N1 CHECK" by following the Accomplishment Instructions, paragraph 3.A.(1) (on pages 5 and 6) of ASB003.

(1) If the OEI rating is reached, affix a placard to the instrument panel in plain view of the pilot(s), which states: "Maximum operating altitude is 16,000 ft PA."

(2) If the OEI rating is not reached, either affix a placard as required by paragraph (e)(2)(i)(A) or comply with paragraph (e)(2)(iii)(C) of this AD.

(C) Before operating between 10,000 ft PA and 13,000 ft PA, perform the "MAX N1 CHECK" by following the Accomplishment Instructions, paragraph 3.A.(1) (on page 7) of ASB003.

(1) If the OEI rating is reached, affix a placard to the instrument panel in plain view of the pilot(s), which states: "Maximum operating altitude is 13,000 ft PA."

(2) If the OEI rating is not reached, affix a placard as required by paragraph (e)(2)(i)(A) of this AD.

(3) If an engine, FCU, engine module 2, or engine module 3 is replaced, before any flight operation at or above a PA of 10,000 feet, comply with the requirements of paragraph (e)(1) of this AD for the Model MBB-BK 117 C-1 helicopter or paragraph (e)(2) of this AD for the Model MBB-BK 117 C-2 helicopter.

(4) Modifying both engines with Turbomeca Modification TU 358 in accordance with Turbomeca Groupe SAFRAN (Turbomeca) Service Bulletin No. 292 73 0358, dated October 2, 2007, is optional terminating action for the requirements of this AD. This AD does not require returning any parts to Turbomeca nor does it require that you perform the modification at a specific location. After modifying both engines, remove from the helicopter any placard required by this AD and remove from the RFM the revised altitude limitations and the revised performance pages required by this AD.

(f) Alternative Methods of Compliance (AMOCs).

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Ed Cuevas, Aviation Safety Engineer, Safety Management Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email ed.cuevas@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.

(g) Additional Information.

The subject of this AD is addressed in European Aviation Safety Agency (Germany) AD No. 2008-0061, dated March 27, 2008.

(h) Subject.

Joint Aircraft Service Component (JASC) Code: 1100, Placards and Markings.

(i) Material Incorporated by Reference.

(1) You must use the specified portions of the following service information to do the specified actions required by this AD. The Director of the Federal Register approved the incorporation by reference of the following service information under 5 U.S.C. 552(a) and 1 CFR part 51:

(i) Eurocopter Alert Service Bulletin No. ASB-MBB-BK117-60-121, Revision 4, dated December 11, 2007; and

(ii) Eurocopter Alert Service Bulletin No. MBB BK117 C-2-71A-003, Revision 3, dated December 11, 2007.

(2) You must use the specified portions of Turbomeca Groupe SAFRAN Service Bulletin No. 292 73 0358, dated October 2, 2007 to do the optional terminating action in this AD. The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(3) For the Eurocopter service information identified in this AD, contact American Eurocopter Corporation, 2701 Forum Drive, Grand Prairie, Texas 75053-4005; telephone (800) 232-0323; fax (972) 641-3710; or at http://www.eurocopter.com. For the Turbomeca Groupe SAFRAN service information identified in this AD, contact SAFRAN Turbomeca, 2709 N. Forum Drive, Grand Prairie, Texas 75052; telephone (800) 662-6322; or at http://www.turbomeca-usa.com.

(4) You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137 or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*

Issued in Fort Worth, Texas, on May 2, 2012.

Carlton N. Cochran,

Acting Manager, Rotorcraft Directorate,
Aircraft Certification Service.

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